REMARKS

This is in response to the Office Action dated February 26, 2002. New claims 13-14 have been added. Thus, claims 1-10 and 12-14 are now pending. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made**."

Claims 1-10 and 12 stand rejected under 35 U.S.C. Section 103(a) as being allegedly unpatentable over Rebeschi in view of Yamada. In particular, the Office Action contends that it would have been obvious to have used the *organic* light emission material of Yamada in the device of Rebeschi. This Section 103(a) combination rejection is respectfully traversed for at least the following reasons.

Claim 1, for example, calls for a method of driving an ***organic*** EL emission device (EL emission device having an ***organic*** light emission layer for EL emission) in a manner such that said prescribed electric fields are substantially always different from each other in at least either strength or polarity in adjacent electrode pair regions. As shown in Fig. 1 of the instant application for example, voltage from source 7 is applied to the different electrode pair regions so that the voltage across a first electrode pair region may be opposite in polarity to the voltage across an adjacent electrode pair region (page 7, lines 9-15). For example, Figure 3 illustrates that electrodes s1 and s2 (which define adjacent electrode pair regions with corresponding electrodes c1, c2) are always subject to a drive voltage with opposite polarity. As explained on page 10 of the instant application, deterioration of the light emission panel due to charge accumulation can be reduced or

prevented by the claimed feature of applying electric fields which differ in strength and/or polarity to adjacent electrode pair regions in an ***organic*** EL emission device.

EL emission devices are classified into two separate and distinct categories; namely *organic* and *inorganic*.

Inorganic -- As explained on page 1 of the instant application, inorganic EL emission devices utilize fluorescence emitted by relaxation of energy at luminescence centers. The luminescence center is excited by collision with accelerated electrons that reside inside the light emission layer with a high electric field between the two electrode layers. Thus, inorganic EL emission devices require application of high voltage (e.g., see pg. 1, lines 16-24, of the instant specification).

Organic -- In contrast, organic EL emission devices utilize fluorescence emitted when organic molecules return to their ground state of energy from their excited state caused by recombination of holes and electrons at luminescence centers (e.g., see pg. 1, lines 25-27, of the instant specification). The holes and electrons are injected into the light emission layer from a positive electrode layer and a negative electrode layer, respectively. Thus, in general, organic EL emission devices are characterized by DC being injected into the light emission layer to produce EL emission at relative low voltage. *The instant invention is concerned with organic EL emission devices; not inorganic.*

The alleged Section 103(a) combination of Rebeschi and Yamada would *destroy* the functionality and operation of the base reference Rebeschi for the following reasons, thereby rendering the Section 103(a) combination clearly incorrect as a matter of law.

Rebeschi discloses an *inorganic* EL emission device which uses ZnS doped with Mn for an EL material (col. 3, lines 54-55). As shown in Fig. 2 of Rebeschi, insulating layer 213 is provided between electrode layer 212 and EL material 214, and another insulating layer 215 is provided between *inorganic* EL material 214 and electrode layer 216. When DC voltage higher than a threshold voltage (e.g., 180 V) is applied between electrodes 212 and 216, electrons tunnel through layers 213-215 and excite Mn in EL material 214 and the Mn emits photons (e.g., col. 3, lines 56-64).

The Office Action contends that it would have been obvious to have replaced the inorganic EL material 214 of Rebeschi with the organic EL material of Yamada. However, if this alleged modification were carried out, the functionality and operation of Rebeschi would be destroyed. In particular, if an organic EL material was used for light emission in Rebeschi's EL emission device, the organic EL material would be readily destroyed by the required DC voltage higher than 180 V threshold. If a lower voltage was used in an attempt to prevent destruction of the organic EL material (e.g., 15 V), then DC current could not flow through insulating layers 213 and 215, and the light emission layer could not emit photons. It can be clearly seen that the alleged Section 103(a) combination set forth in the Office Action would destroy the base reference device. It is thus fundamentally flawed and should be withdrawn.

New claim 13 requires that the prescribed electric fields are substantially always different from each other in at least either strength or polarity for *all* adjacent electrode pair regions in the EL emission device. The cited art fails to disclose or suggest this.

New claim 14 requires driving the organic EL emission device in a manner such that said prescribed electric fields at a *given point in time* are substantially always different from each other in *polarity* as applied to electrode pair regions adjacent to each other. Again, the cited art fails to disclose or suggest the invention of claim 14.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn and the application passed to issue. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: ______________________________
Joseph A. Rhoa
Reg. No. 37,515

JAR:caj
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (*Amended*) In an organic EL emission device comprising:

first and second electrode layers, at least one of which is transparent,

an organic light emission layer for EL emission sandwiched between said first and second electrode layers for together supplying prescribed electric fields to said organic light emission layer, wherein

at least said first electrode layer includes a plurality of electrodes arranged with spatial periodicity, and

said plurality of electrodes included in said first electrode layer together with adjacent regions in said second electrode layer including at least one electrode form a plurality of electrode pair regions arranged with spatial periodicity,

a method comprising driving said organic EL emission device in a manner such that said prescribed electric fields are substantially always different from each other in at least either strength[s] or polarity as applied with variation in a time-dependent manner to electrode pair regions adjacent to each other among said plurality of electrode pair regions.

10. (*Unamended*) An organic EL emission device, comprising:

first and second electrode layers, at least one of which is transparent;

an organic light emission layer for EL emission sandwiched between said first and second electrode layers, said first and second electrode layers for supplying prescribed electric fields to said organic light emission layer; and

voltage application means for applying a voltage between an electrode included in said first electrode layer and an electrode included in said second electrode layer, wherein

at least said first electrode layer includes a plurality of electrodes arranged with spatial periodicity,

said plurality of electrodes included in said first electrode layer together with adjacent regions in said second electrode layer including at least one electrode form a plurality of electrode pair regions arranged with spatial periodicity, and

said voltage application means applies said prescribed electric fields in a manner such that said prescribed electric fields are substantially always different from one another in at least either strength or polarity in adjacent electrode pair regions and vary in a time-dependent manner.

12. (*Unamended*) In an organic EL emission device comprising:

first and second electrode layers, at least one of which is transparent, and

an organic light emission layer for EL emission sandwiched between said first and second electrode layers for supplying prescribed electric fields to said organic light emission layer, wherein

at least said first electrode layer includes a plurality of electrodes arranged with spatial periodicity, and

said plurality of electrodes included in said first electrode layer together with adjacent regions in said second electrode layer including at least one electrode form a plurality of electrode pair regions arranged with spatial periodicity,

a method comprising driving said organic EL emission device so that said prescribed electric fields different from each other in at least either strength or polarity are applied with variation in a time-dependent manner to electrode pair regions adjacent to each other among said plurality of electrodes pair regions, so as to allow a half or less than a half of the total number of electrode pair regions to emit light at a time.

Please add the following new claims:

13. (*New*) The method of claim 1, wherein said prescribed electric fields are substantially always different from each other in at least either strength or polarity for all adjacent electrode pair regions in the EL emission device.

14. (*New*) In an organic EL emission device comprising first and second electrode layers, at least one of which is transparent, an organic light emission layer for EL emission sandwiched between said first and second electrode layers for together supplying prescribed electric fields to said organic light emission layer, wherein at least said first electrode layer includes a plurality of electrodes arranged with spatial periodicity, and said plurality of electrodes included in said first electrode layer together with adjacent regions in said second electrode layer including at least one electrode form

a plurality of electrode pair regions arranged with spatial periodicity, a method comprising:

driving said organic EL emission device in a manner such that said prescribed electric fields at a given point in time are substantially always different from each other in polarity as applied to electrode pair regions adjacent to each other.